

Abstract of the Disclosure

The invention relates to a breathing mask for use in monitoring a patient. The mask provides sensors built into the mask for ease of application to a patient such that donning the mask places all the required sensors on the patient. The mask has a perimeter with a soft pliable material with sensors therein for contacting the skin of the patient and making an airtight seal. The mask also has sensors on the body of the mask and on the associated straps or caps. Sensors may also be independently applied to the patient and work in conjunction with the sensors on the mask. The sensors can be used for monitoring the patients EMG, EEG, EOG ECG, surface blood pressure, temperature, pulse, blood oxygen the position of the patient, the activity level of the patient, the sounds coming from the patient, and the gas pressure in the mask. In addition the mask may measure the leakage rates of the mask, the gas pressure inside the mask, the gas flow into the mask, the patients breathing rate, the volume of breathing, nasal breathing, oral breathing, and the ambient temperature and light levels. The mask can be used to monitor breathing problems, including sleep apnea or to monitor a patient during administration of anesthesia. The data acquired from the mask sensors and related sensors can be stored or fed into a computer to analyze the patient's condition and provide feedback information for administering gas to the mask.